WORK ZONE TRAFFIC CONTROL
DESIGN CHECKLIST

REMEMBER, a comprehensive traffic control PS&E is actually a project within a project. WSDOT is obligated to provide a safe and workable proposal for controlling traffic, which is consistent with the project construction requirements. Even though there may be more than one workable solution, a thorough analysis of all the variables will help to produce a traffic control PS&E that sets the appropriate level of safety.

PROJECT DEFINITION & PLANNING

[] Work Zone Traffic Control Strategy Statement for Design Documents:
- **[] Informal in house conference with PEO & WZTC specialist**
- **[] WZTC options and strategies**
- [] formal conference with local agencies & WSDOT
- **[] Final WZTC strategy statement for project definition documentation**

[] Work Zone Capacity Analysis
- **[] Existing level of service**
- **[] Existing lane capacity-VPHPL**
- **[] Work hour restrictions-days & hours**
- **[] Detour route capacity analysis**
- **[] Select appropriate work zone type(s)**
  (1) long-term stationary (4) short duration
  (2) intermediate stationary (5) mobile
  (3) short-term stationary

[] Existing Operational Factors
- **[] Coordinate with Region traffic operations**
- **[] Localized traffic operational problems**
- **[] Accidents (include previous WZTC, maintenance or contract)**
- **[] Geometric conflicts or issues**
- **[] High speed/low speed**
- **[] Coordinate with local maintenance supervisor**
- [] commercial/private access impacts
- [] adjacent project coordination
- [] special events
- [] ferry schedules
- [] seasonal factors
- [] on street parking
- [] emergency services
- [] other regulatory conditions
- [] transit, schools, parks, etc.

[] Work Zone Location Considerations
- **[] Define all work zone limits/locations**
- [] existing lane conflicts
- [] roadside objects & conflicts
- [] overhead & overwidth clearance conflicts
- [] vertical/grade/profile conflicts
- [] staged work zones
- [] work zone base plan - CADD files & aerial photo

[] Worker Safety
- **[] Positive separation - barriers**
- **[] Worker exposure during :**
  - **(1) set up**
  - **(2) removal**
  - **(3) work operations**
- **[] Flagger protection (no freeway use)**
- **[] Truck Mounted Attenuator**
- **[] Portable barriers – temp. concrete, movable barrier, water-filled, etc.**
- **[] Inspector protection**
- **[] Work zone intrusion analysis & mitigation techniques**

TYPES OF WORK ZONE TRAFFIC CONTROL

[] Long Term

STRATEGY	PLAN TYPE
[] total road closure	DETOUR
[] partial road closure	CROSS-OVER
[] interchange closure	DETOUR
[] ramp closure	DETOUR
[] crossroad closure	DETOUR
[] lane shift	TEMP CHANN
[] lane closure	TEMP CHANN
[] shoulder closure	TEMP CHANN
[] reversible lanes	TCP
[] temp./portable traffic signal control	TCP
[] temp. yield/stop control	TCP
[] temp. widening/connections	TEMP CHANN
[] temp. structures	TEMP CHANN
[] staged traffic control	STAGING PLANS
[] island work zone(center lane closure)	TEMP CHANN

[] Short Term

STRATEGY	PLAN TYPE
[] off-peak roadway closures:	DETOUR
total & partial road closure	DETOUR
interchange & ramps	DETOUR
crossroad, intersection	DETOUR
[] off-peak lane closures	TCP
[] shoulder closure	TCP
[] flagger control	TCP
[] pilot car control	TCP
[] traffic stop	TCP

(MUTCD part VI has guidelines for work zone type and duration)

[] Construction Considerations for WZTC
- **[] Removal of permanent traffic control features**
- **[] Maintaining existing features: illumination, signing, etc.**
- **[] Work area access control-safe ingress & egress**
- **[] Adequate work zone space for contractor**
- **[] Time frame to complete work and re-open to traffic**
- [] time saving work methods
- [] time saving materials
- [] temporary illumination or signals
- [] winter shut down, intermediate WZTC stage?
- [] cure time, closure pours
- [] temporary drainage
- [] construction / traffic compatibility
- [] staged WZTC switch over time to new stage
- [] existing shoulder durability for temporary lane (shoulder failure)

Refer to the MUTCD, Traffic Manual, Design Manual, Standard Specifications and Construction Manual for further guidance.

TRAFFIC CONTROL FEATURES

[] Special Devices
- [] portable/temp. traffic signal
- [] intrusion alarms
- [] truck mounted attenuator
- [] buffer/shadow vehicles
- [] high level warning flags
- [] glare / work zone screen
- [] pedestrian fence
- [] flashing stop/slow paddle
- [] portable HAR's

[] Special Signs
- [] port. changeable message sign
- [] advance date notice of closure signs
- [] speed advisory signs
- [] regulatory speed zone signs

[] Special Considerations
- **[] WSP assistance**
- **[] Night work**
- **[] Oversize loads**
- **[] Peds and bikes**
- **[] WZTC supervisor**
- **[] WZTC patroller**
- [] roadway flares
- [] reduced sight distance
- [] safe speed for temp. alignment (ball bank)
- [] liquidated damages
- [] innovative contract techniques
- [] haul routes
- [] blasting operations
- [] emergency traffic control
- [] emergency parking

[] Special Lighting
- **[] Flagger station illumination**
- [] sign illumination
- [] detour illumination
- [] temporary illumination
- [] high mast lighting
- [] warning lights

[] Innovative Products
- [] illuminated flagging paddle
- [] water filled barrier
- [] rumble strips

[] Work Zone / Traffic Protection
- **[] Roadside hazard protection**
- **[] Buffer space, lateral and longitudinal**
- [] temporary impact attenuators
- [] barrier/guardrail connections
- [] movable concrete barrier
- [] water filled barrier
- [] temporary concrete barrier
- [] barricades
- [] recovery area
- [] shy distance

[] Positive Guidance
- [] temporary RPM's
- [] temporary pavement marking
- [] traffic safety drums
- [] type "c" steady burn lights
- [] reduced device spacing
- [] temporary guidepost

DESIGN CONSIDERATIONS

[] preliminary field review
[] design with existing driver expectation in mind
[] design for existing speed, posted or higher
[] start design from work zone perspective
[] design based on the most desirable, yet practical traffic configuration
[] design from drivers point of view
[] layout temporary channelization
[] build in recovery area and buffer space
[] provide adequate detail (station callouts for temporary features) for field layout
[] temporary channelization must provide positive driver guidance
[] clear separation between work zone and traffic, use positive barriers?
[] use permanent design standards whenever possible
[] build in work area ingress and egress access
[] design above minimums when possible
[] establish highly visible sign locations (verify where possible, SRView, etc.)
[] don't depend on signs to guide traffic
[] mentally drive through the TCP from all approaches and all lanes
[] will TCP actually fit site conditions? (scaled plan?)
[] final field review
[] risk assessment, comfortable with level of safety, liability issues?
[] final approval with traffic engineer and construction P.E.

PROJECTED IMPACTS

[] Worker / traffic exposure
[] Local agency impact
[] Coordination with region PIO for public awareness & media notification
[] traffic delay - time
[] user costs - $
[] backups - queue length
[] traffic control cost
[] constructibility issues
[] commercial impacts
[] overlapping project coordination / WZTC
[] conflicts with existing permanent traffic control features, signs, markings, etc.
[] reversed/revised intersection control

FINAL APPROVAL

[] Regional Traffic Engineer or Regional Traffic Control Specialist
[] Regional Management Approval
[] Construction P.E. Concurrence
[] Consistent with FHWA (MUTCD) & WSDOT policies
[] Detour Agreement Approval
[] WSP Agreement Approval
[] Local Agency Approvals
[] Noise Ordinance
[] Blasting Ordinance

Required checklist items **BOLD**